

Notice of Allowability	Application No.	Applicant(s)	
	09/554,882	ETOH ET AL.	
	Examiner	Art Unit	
	Nelson D. Hernandez	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 7 February 2005.
2. ☒ The allowed claim(s) is/are 1,3,5-8,12-23,25-27,29 and 30.
3. ☒ The drawings filed on 22 May 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Allowable Subject Matter

1. **Claims 1, 3, 5-8, 12-23, 25-27, 29 and 30** are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:

Regarding **claims 1, 12, 25, 26, 29 and 30**, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest a plurality of drain gates, each provided at the output of one of said longitudinal sections, each drain gate for discharging electric signals generated by an associated signal converter to a drain line connected to each said drain gate; and a read-out circuit connected to said drain line for directly reading-out a read-out signal from said longitudinal sections.

Etoh, US Patent 6157408 discloses a high-speed image sensor (Fig. 1: 2) comprising a plurality of signal converters (Figs. 3: 18 and 4: 23) for generating electric signals according to an incident light intensity and a plurality of electric signal recorders (25A – 25F in figs. 4, 7-10, 14 and 22) for storing electric signals output from corresponding signal converters, wherein said electric signal recorders are linear shaped and provided with a read-out line for each of longitudinal sections thereof, the read-out line being used for directly reading the electric signals out of a light perceptive area (Col. 8, lines 42-51; col. 9, lines 5-59, col. 12, lines 50-61).

However, Etoh fails to teach or reasonably suggest a plurality of drain gates, each provided at the output of one of said longitudinal sections, each drain gate for

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discharging electric signals generated by an associated signal converter to a drain line connected to each said drain gate; and a read-out circuit connected to said drain line for directly reading-out a read-out signal from said longitudinal sections.

Regarding **claims 18 and 27**, the main reason for indication of allowable subject matter is because the prior art fails to teach or reasonably suggest a center line of each said electric signal recorder, in a direction from one position where electric signals are input from a signal converter to another position where electric signals are input from an adjacent signal converter, is inclined with respect to a line connecting two of the signal converter, adjacent to each other in an extension direction of the recorders, to corresponding electric signal recorders..

Etoh, US Patent 6,157,408 discloses a high speed image sensor (Fig. 1: 2) comprising a plurality of signal converters (Figs. 1: 2, 3: 18 and 4: 23) for generating electric signals according to an incident light intensity and a plurality of electric signal recorders (25A – 25F in figs. 4, 7-10, 14 and 22) for storing electric signals output from corresponding signal converters, wherein said signal converters are disposed in all of square or rectangular frames in a light receptive area (Col. 8, lines 42-51; col. 9, lines 5-59, col. 12, lines 50-61). Etoh also teaches in fig. 20 one of the center lines of the recorders S1-S9 being obliquely slashed and placed. However, Etoh fails to teach or reasonably suggest a center line of each said electric signal recorder, in a direction from one position where electric signals are input from a signal converter to another position where electric signals are input from an adjacent signal converter, is inclined with

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respect to a line connecting two of the signal converter, adjacent to each other in an extension direction of the recorders, to corresponding electric signal recorders.

Contact


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernandez whose telephone number is (571) 272-7311. The examiner can normally be reached on 8:00 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R. Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nelson D. Hernandez
Examiner
Art Unit 2612

NDHH
April 14, 2005


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600